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पेंट्स, इनेमल, वार्निश और संबंधित उत्पादों  
के पैकेजों की पैकिंग और मार्किंग  
के लिए — रीति संहिता

( पहला पुनरीक्षण )

Packing and Marking of Packages of  
Paints, Enamels, Varnishes and  
Allied Products — Code of Practice

( First Revision )

ICS 87.040

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Paints, Varnishes, and Related Products Sectional Committee had been approved by the Chemical Division Council.

A large number of material specifications for paints, varnishes and allied products have created the need for a standard code of practice for packing, marking and packaging intended to serve the needs of indentors, suppliers and all those concerned with the use of these specifications.

This standard was first published in 1970. This revision has taken to bring out the standard in the latest style and format of the Indian Standard. In addition, the following changes have been made:

- a) Corrugated fibreboard boxes have become the popular choice when it comes to packing and storing goods due to its superior performance and easy handling over the other packing materials. Therefore, slotted corrugated fibreboard has been prescribed in place of rectangular solid wood case packaging;
- b) Considering smooth and efficient palletisation by the shrink film or stretch wrap the use of hay or bags filled with sawdust or rice husk has been redundant. Therefore, stretch film or stretch wrap has been prescribed for palletisation in order to prevent jolting. Also, the expanded polystyrene or polystyrene foam has been prescribed to prevent during transit;
- c) In order to trace the goods, batch and lot numbers have been added to the labelling provision of containers; and
- d) References of Indian Standards have been updated wherever required.

For the guidance of those concerned, an informative Annex A has been included listing containers normally used for packing of paints and allied products with the corresponding Defence Service Catalogue Numbers (DS Cat No.) and recommended materials to be packed.

The composition of the Committee responsible for the formulation of this standard is listed in Annex B.

*Indian Standard*

# PACKING AND MARKING OF PACKAGES OF PAINTS, ENAMELS, VARNISHES AND ALLIED PRODUCTS — CODE OF PRACTICE

*( First Revision )***1 SCOPE**

This code prescribes the methods of packing and marking of packages of paints, enamels, varnishes and allied products.

**2 REFERENCES**

The Standards given below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Indian standard are encouraged to investigate the possibility of applying the most recent editions of these standards:

<i>IS No.</i>	<i>Title</i>
IS 1303 : 1983	Glossary of terms relating to paints ( <i>second revision</i> )
IS 1394 : 1984	Glossary of terms relating to metal containers ( <i>third revision</i> )
IS 1406 : 1995	Rectangular tins for liquids — Specification ( <i>fourth revision</i> )
IS 1407 : 1980	Specification for round paint tins ( <i>second revision</i> )
IS 1503 : 1988	Wooden packing cases — Specification ( <i>third revision</i> )
IS 2552 : 1989	Steel drums (galvanized and ungalvanized) — Specification ( <i>third revision</i> )
IS 2771 (Part 1) : 2022	Corrugated fibreboard boxes — Specification: Part 1 General requirements ( <i>third revision</i> )

**3 TERMINOLOGY**

For the purpose of this standard, definitions given in IS 1303, IS 1394 and the following shall apply.

**3.1 Tender Sample** — The sample submitted by the supplier with his tender.

**4 PACKING AND MARKING****4.1 Packing**

**4.1.1** The supplier shall clearly state at the time of submitting tender sample, the capacities and types of containers in which the material shall be supplied.

**4.1.2** The material shall be supplied in new clean and dry containers of the type and size specified.

**4.1.2.1** The closure, lid screw-cap shall be well screwed in position to ensure an air-tight seal.

**4.1.2.2** Each container shall contain the same net volume/weight of the material according to the capacity of the container.

**4.1.3 Rectangular and Round Tins****4.1.3.1 Rectangular tins**

These shall conform to IS 1406 and shall be of 500 ml, 1 000 ml or 5 000 ml capacity.

**4.1.3.2 Round tins**

These shall conform to IS 1407 and shall be of 200 ml, 500 ml, 1 000 ml or 4 000 ml capacity.

**4.1.3.3** The filled containers shall be packed in slotted corrugated fibreboard boxes conforming to IS 2771 Part 1. Suitable lining and cushioning material shall be used to avoid damage in transit.

**4.1.4 Dual Containers**

**4.1.4.1** Aluminium paste or powder shall be packed in the interior cylinder and the vehicle in the outer.

**4.1.4.2** The container shall consist of two coaxial cylinders, one inside the other both fabricated from 0.40 mm tinplate. The outer cylinder provided with a suitable handle, having a full aperture tight fitting, double or single lever lid and an overall capsule covering the lid. The top and bottom rims shall be double seamed to cylindrical body, the side seam shall be grooved and sound soldered. The capacity shall be 4 litres with a maximum of 5 percent ullage space. The outer of the shall be painted suitably. The inner cylinder shall also be of sound construction with side seam, top and bottom rims and having a full aperture tight fitting single lever lid. The top rim shall be sound soldered concentrically to the lever lid of the outer cylinder. The size of the cylinder shall be capable of holding so much aluminium powder/paste as to give not less than 15 percent aluminium pigment in paint to be finally prepared.

**4.1.4.3** Four filled containers shall be packed in a rectangular solid wood packing case of suitable

dimensions conforming cylinder to IS 1503 with suitable lining and cushioning materials. The maximum weight of each package shall not exceed 40 kg.

**4.1.4.4** The rectangular wooden packages shall be strapped or wired at two places. The straps shall be of galvanized mild steel, 1.83 mm to 2.64 mm thick. If wired, it shall be placed as close to the buttons as possible, but not over them.

#### **4.1.5 Drums and Kegs**

**4.1.5.1** Drums and kegs shall be of either galvanized or mild steel with recommended closures and shall conform to IS 2552. The capacity of drums or kegs shall be 5 litres, 10 litres and 20 litres.

**4.1.5.2** The filled drums and kegs, comprising of full wagon load shall be loaded for despatch in full wagons as given in **4.1.5.3**.

**4.1.5.3** The filled containers shall be properly packed and every precaution taken to avoid loss or damage in transit. The filled containers shall be wrapped in shrink film or stretch wrap. Expanded polystyrene or polystyrene foam might be used for specific cases. The containers themselves shall be packed tightly side by side where the bottom of the wagon has curved edges. Then curved empty space shall also be filled with bags filled with cushioning material. The second and subsequent tiers shall be loaded in a similar manner suitably stuffed with cushioning material. The bags shall be of *ad hoc* sizes for stuffing into crevices and vacant spaces.

**4.1.5.4** Filled drums and kegs in small numbers, which are insufficient to make a full wagon load, shall be despatched loose.

## **4.2 Marking**

### **4.2.1 Marking of Containers**

The containers shall be marked with the following:

- a) Name and class of material;
- b) Name of the manufacturer and/or trade-mark, if any;
- c) Batch/Lot number;
- d) Volume/Weight of the material; and
- e) Date of manufacture.

**4.2.1.1** A circular band of not less than 1.3 cm in width of the same colour as that of the contents of the containers except in the cases of oils, varnishes and thinners below the upper rim.

**4.2.1.2** The supply when intended for defence users, the containers shall be marked with the

information given in **4.2.1** and the following:

- a) DS Cat No.; and
- b) Contract No.

**4.2.1.3** Emergency procedure labels-general guidance for dealing with spillage and leakage and instruction for emergencies shall be marked.

### **4.2.2 Containers Containing Flammable Materials**

All containers for storage and transport of this class of material, since classified as dangerous and flammable goods, shall in addition, comply with the requirement of latest issue of red tariff and requirements as laid down from time to time by the Chief Inspectorate of Explosives, Government of India, for packing, storage and transit of flammable liquids and the *Board of Trade Regulations* as applicable thereon for transport by steamers.

**4.2.2.1** The containers shall also be marked 'HIGHLY FLAMMABLE LIQUID' in red letters and the flash point of the contents.

**4.2.2.2** In case of drums, in addition to the information prescribed in **4.2.1**, the serial number of drums together with total number of drums in the same delivery shall also be stated.

**4.2.2.3** In case of dual containers, in addition to the information prescribed in **4.2.1**, the following shall also be marked:

Mix the total quantity of aluminium powder/paste in the inner container with the varnish medium in the outer by constant stirring with a clean metal rod just prior to use.

### **4.2.3 Marking of Rectangular, Solid Wood Packing Cases**

Each case shall be legibly and indelibly marked on top and on one of the longer sides as follows:

- a) Name, and class of material;
- b) Quantity packed;
- c) Serial number of packages with total number of packages in the same delivery;
- d) Manufacturer's name and/or recognized trade-mark, if any; and
- e) Inscription of the words 'HIGHLY FLAMMABLE' in 5 cm red block letters in case of packages of flammable materials like nitrocellulose paints, lacquers, thinners, etc.

**4.2.3.1** When the material is intended for defence users, the case shall be marked with DS Cat No. and Contract No. also in addition to those given in **4.2.3**.

## ANNEX A

(Foreword)

**INFORMATION REGARDING TYPES OF CONTAINERS, THEIR SIZES, DS CAT NUMBER AND  
RECOMMENDED MATERIALS TO BE PACKED**

<i>Sl No.</i>	<i>Description</i>	<i>Capacity</i> ml	<i>DS Cat No.</i>	<i>Recommended Materials to be Packed</i>
(1)	(2)	(3)	(4)	(5)
i)	Rectangular tins	500	8 110 – 000 015	Paints, tinnings, enamels and varnishes classified under both classes A and B flammable liquids ( <i>see</i> Notes 1 and Note 2)
		1 000	8 110 – 000 016	
		5 000	8 110 – 000 017	
ii)	Round tins	200	8 110 – 000 011	Paints, enamels, varnishes and nitrocellulose dopes and finishes classified under both Classes A and B flammable liquids ( <i>see</i> Notes 1 and Note 2)
		500	8 110 – 000 012	
		1 000	8 110 – 000 013	
		4 000	8 110 – 000 014	
iii)	Dual containers	5 000	-	Aluminium paints classified under both Classes A and B flammable liquids ( <i>see</i> Note 1 and Note 2)
iv)	Drums, mild steel	3 000	8 110 - 000 003	Paints, enamels and varnishes classified under Class B ( <i>see</i> Note 2) flammable liquids only.
		5 000	8 110 – 000 004	
		15 000	8 110 – 000 005	
		20 000	8 110 - 000 006	
v)	Drums, galvanized	5 000	8 110 – 000 001	Thinners, paints, enamels, varnishes and nitrocellulose dopes and finishes classified under flammable liquids both Classes A and Class B ( <i>see</i> Note 1 and Note 2)
		25 000	8 110 - 000 002	
vi)	Kegs, mild steel	3 000	8 110 – 000 007	Putty and pastes
		5 000	8 110 - 000 008	
		10 000	8 110 – 000 009	
		15 000	8 110 - 000 010	

## NOTES

**1** Flammable liquids, the vapours of which have flash point below 24.4 °C are classified as highly flammable liquids, Class A.

**2** Flammable liquids, the vapours of which have flash point between 35.0 °C and 24.4 °C (both inclusive) are classified as flammable liquids, Class B.

## ANNEX B

(Foreword)

## COMMITTEE COMPOSITION

Paints, Varnishes and Related Products Sectional Committee, CHD 20

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Institute of Chemical Technology, Mumbai	PROF P. A. MAHANWAR, ( <b>Chairperson</b> )
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